Synthetic Zeolites: (Cont.) SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites and methods for their investi- zeolites. No personalities are mentioned. References follow individual articles.

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Synthetic Zeolites: (Cont.) SOV/6246

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TOMKONOG, I.G.; CHMUTOV, K.V.

Effect of the kinetic factor on the separation of liquid mixtures on synthetic zeolites. Zhur.fiz.khim. 39 no.10:2435-2439 O '65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR. Submitted June 24, 1964.

LARIONOV, O.G.; TONKONOG, L.G.; OKMUTOV, K.V.

Calculating the true adsorption of mixture components from nonelectrolyte solutions. Zhur. fiz. khim. 39 no.9:2226-2231 S '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN SSSR.

TONKONOG, L.G.; CHMUTOV, K.V.

Dehydration of ethyl alcohols by means of a synthetic zeolite
Ma.l. Zhur.fiz.khim. 39 no.11:2804-2806 N '65.

1. Institut fizicheskoy khimii AN SSSR.

(MIRA 18:12)

KOBEZA, I.I.; GARCHENKO, V.T.; CHERNYAVSKIY, V.G.; ZAYTSEV, I.I.; TONKONOG, N.G.

Technical and economic indices of the operation of open-hearth furnaces with the use of intensifiers. Met. i gornorud. prom. no.3:15-22 My-Je '65. (MIRA 18:11)

KOZLOV, Ya.K., inzh.; SAVIN, G.P., inzh.; KUSHNIKOVA, V.S., inzh.; TONKONOG, V.A.

"Dies for forging and stamping power presses" by D.E. Shaposhnikov. Reviewed by IA. K. Kozlov and others. Vest. mash. 38 no. 6:85-86 Je '58. (MIRA 11:7)

(Dies(Metalworking))

MUN, A.I.; TONKONOGAYA, L.A.

Lithium in the lakes of central Kazakhstan. Geokhimiia no.7:617-623 '62. (MIRA 15:7)

1. Institute of Chemical Sciences, Academy of Sciences of the Kazakh Soviet Socialist Republic, Alma-Ata.
(Kazakhstan--Lithium)

S/007/62/000/007/003/003
B107/B180

AUTHORS: Mun, A. I., Tonkonogaya, L. A.

TITLE: Lithium in the lakes of Central Kazakhstan

PERIODICAL: Geokhimiya, no. 7, 1962, 617 - 623

TEXT: The lithium content in salt, brackish and fresh-water lakes of Central Kazakhstan was determined with a Zeiss flame photometer model III. Results: (1) The average lithium content of the salt depositing lakes of Central Kazakhstan is $1.5 \cdot 10^{-4}$ - $2.0 \cdot 10^{-3}$%. The $Li \cdot 10^4/Cl$ ratio is much higher than sea water (0.08). It seems that the lithium content is independent of the chemistry and is a linear function of the total salt concentration. (2) In fresh and brackish water lakes. Lithium concentration varies between 0.11 and $0.87 \cdot 10^{-4}$%, fluctuations being low where salination is low, ($0.11 - 0.25 \cdot 10^{-4}$%). Lakes containing sodium bicarbonate seem to contain rather more. The ratio $Li \cdot 10^4$/(sum of ions) is high in waters confined in granitic massifs. (4) Higher lithium concentration in the mud waters of fresh and salt water lakes is due to the higher concentration of the solu-

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tions; the Li/Cl ratio remains constant. Distribution of lithium in the liquid phase is not affected by the type of sediment, i. e. the proportion of the pelitic fraction and C_{org}. There is reason to suppose that the higher C_{org} content is connected with the greater amount of dissolved lithium, perhaps owing to a biogenic factor. There are 1 figure and 4 tables.

ASSOCIATION: Institut khimicheskikh nauk AN Kazakhskoy SSR, Alma-Ata (Institute of Chemical Sciences of the AS of the Kazakhskaya SSR, Alma-Ata)

SUBMITTED: March 9, 1962

TONKONOGIY, A.V.

Comparative study of pulverized coal systems comprising low-capacity hammer mills. Izv.AN Kazakh.SSR.Ser.energ. no.4/5:42-55 '54.

(Coal, Pulverized) (MLRA 9:5)

TONKONOGIY, A. V.

VULIS, L. A., LEONT'YEVA, T. P., and TONKONOGIY, A. V.

"Stabilizing a Coal-Pulverizing Jet,"
Vestn. AN Kazakh SSR, No 5, pp 54-64, 1954

Considers the question of the possibility of stabilizing a coal-pulverizing jet with the aid of counter currents (aerodynamic stabilization.) The authors feel that a shortcoming of the method of stabilization by poorly streamlined bodies is the limited possibility of regulating the length of the jet, owing to the fact that the quantity of returnable hot products of combustion remains constant. They suggest using a single counter current whose speed is greater than that of the basic limitless flow. (RZhMekh, No 4, 1955)

SO: Sum, No 606, 5 Aug 55

TONKONOGIY, A. V.

Subject : USSR/Engineering AID P - 2322

Card 1/1 Pub. 110-a - 3/17

Author : Basina, I. P., and A. V. Tonkonogiy, Kands. of Tech. Sci.

Title : On combustion and separation of fuel particles in a cyclone furnace

Periodical : Teploenergetika, 5, 17-21, My 1955

Abstract : A mathematical analysis of motion of fuel particles in the furnace chamber is given. The time needed for combustion and for splitting of particles is determined. The authors deduce that only the smallest particles burn in the cyclone proper and that the main combustion process occurrs in the slag covering the chamber wall. Ten curves. Four Russian references, 1934-1954 and 1 German reference, 1952.

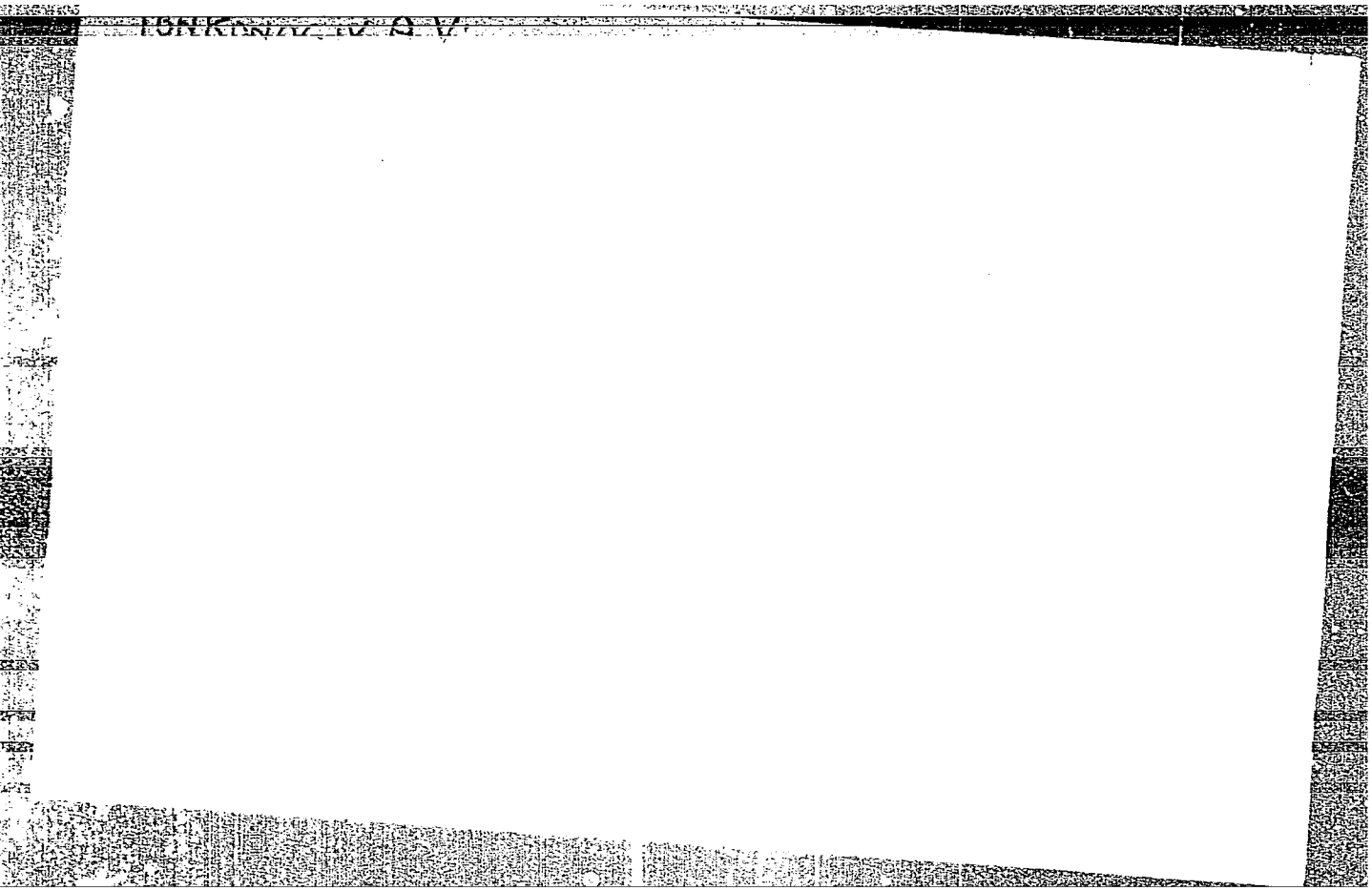
Institution : Power Engineering Institute, Academy of Sciences, Kazakh SSR

Submitted : No date

TONKONOGIY, A.V.; BASINA, I.P.

Burning some Kazakh coals in a cyclone furnace. Izv. AN Kazakh.SSR.Ser.energ. no.10:103-113 '56. (MLRA 9:12)

(Combustion) (Furnaces) (Kazakhstan--Coal)



TONKONOGIY, A.V., kandidat tekhnicheskikh nauk.

The advantages of using preliminary muffles in reverberatory copper smelters. Vest. AN Kazakh. SSR 12 no.9:65-78 S '56.
(MLRA 9:10)

(Smelting furnaces)

TONKONOGIY, A.V.

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 77 (USSR) SOV/137-59-3-5476

AUTHORS: Basina, I. P., Tonkonogiy, A. V.

TITLE: Cyclone-smelting Method (Tsiklonnyy metod plavki)

PERIODICAL: V sb.: Materialy Soveshchaniya po vopr. raboty pechey tsvetn. metallurgii i razvitiya pirometallurg. protsessov. Moscow, 1957, pp 130-143

ABSTRACT: A description is given of the principle of cyclone smelting (CS) for concentrates. As a result of theoretical investigations it was found that the process of combustion of solid fuel in a cyclone chamber takes place practically along the wall of the chamber where the charge mixture is melted, also. Comparative data are adduced which characterize different smelting methods, namely, the reverberatory, the fluidized-bed, and the CS method. The advantages of CS are set forth. The layout and a description are adduced of an enlarged installation (10-ton charge per day) for CS, which is operating in the Energetics Institute, Academy of Sciences, Kazakh SSR, and where experiments on smelting of Cu, Cu-Zn, and multimetal concentrates were carried out. The procedure graphs and results of the

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experiments are adduced, which show that CS can be carried out to produce Cu matte of different composition, including a very rich (up to white) matte. In CS of bulk concentrates Cu is melted while Pb (>99%) and Zn (up to 89%) are sublimated.

Yu. O.

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 9 (USSR) SOV/137-59-1-70

AUTHORS: Tonkonogiy, A. V., Basina, I. P.

TITLE: On the Combustion and Separation of Fuel Particles in a Cyclone Fire Chamber (O gorenii i separatsii chastits topliva v tsiklonnoy topke)

PERIODICAL: V sb.: Issled. fiz. osnov rabochego protsessa topok i pechey. Alma-Ata, AN KazSSR, 1957, pp 407-419

ABSTRACT: The separation time for particles of 10 - 150 μ size in a 0.8-m diam chamber for different rates of gas flow was calculated from the general equation for the motion of a particle in a cyclone chamber, solved by the method of finite differences. The separation time is correlated with the burning time of coal particles to CO_2, and it is shown that within a cyclone only the 25 - 50 μ size particles burn depending upon the speed of the flowing gas. Owing to the high temperatures in the cyclone burners the volatile matters separate from the fuel intensively and their combustion occurs in the chamber space, whereas the coke residue of the particles burns in the slag film on the chamber wall. The conclusion thus drawn is compared with experimental data.

G. G.

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Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 53 (USSR) SOV/137-58-12-24302

AUTHOR: Tonkonogiy, A. V.

TITLE: Choice of Burners for Reverberatory Copper-smelting Furnaces (O vybore gorelok dlya otrazhatel'nykh medeplavil'nykh pechey)

PERIODICAL: V sb.: Issled. fiz. osnov rabochego protsessa topok i pechey. Alma-Ata, AN KazSSR, 1957, pp 428-446

ABSTRACT: A communication is presented on studies made in the Power Engineering Institute of the Academy of Sciences, Kazakh SSR, on burners for reverberatory copper-smelting furnaces (RCF). The engineering specifications for the planning of burners are worked out on the basis of investigations of the conditions of combustion and the heat balance of the RCF at the Balkhash Copper Smelter. These are analyzed in detail in the article. These data provide the basis for the design and testing of muffle burners which increase the output capacity up to 20% and improve RCF operation.

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Ya. K

8(6) SOV/112-59-5-8520

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 17 (USSR)

AUTHOR: Tonkonogiy, A. V., and Basina, I. P.

TITLE: Burning High-Ash Coals in a Cyclone Furnace

PERIODICAL: V sb.: Issled. fiz. osnov rabochego protsessa topok i pechey. Alma-Ata, AN Kazakhskoy SSR, 1957, pp 447-456

ABSTRACT: Institut energetiki (Institute of Power Engineering), AS Kazakhskaya SSR, investigated the combustion of some Kazakhstan coals having various ash contents and ash fusibilities; horizontal cyclone experimental furnaces were used. In addition, combustion was investigated of artificially ballast-laden fuel in slanted and vertical cyclones; the ballast-to-fuel ratio (reduced to the reference fuel terms) could be brought up to 4:1. The following conclusions are drawn from the experiments: (1) coals with various ash contents can be successfully burned in a cyclone furnace; the temperature characteristic of the coal is important; low-fusible-ash coals burn easily, high-fusible-ash coals

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can be burned with a highly preheated air; (2) ash fusibility affects not only the reliability of the molten-slag tapping; the liquid slag film on the cyclone walls is no less important, it ensures stable and vigorous burning; (3) with a vertical cyclone, the liquid slag spreads uniformly around the furnace walls and is reliably removed from the chamber; this also permits essential simplification in the furnace design; (4) the experiments with burning of highly ballast-laden fuel show the feasibility of using the cyclone principle not only for power furnaces but also for process furnaces.

S.M.Sh.

SOV/137-58-8-16665

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 61 (USSR)

AUTHORS: Tonkonogiy, A.V., Basina, I.P., Kurmangaliyev, M.R.

TITLE: Experimental Installation for Cyclone Smelting (Opytnaya ustanovka dlya tsiklonnoy plavki)

PERIODICAL: Izv. AN KazSSR. Ser. energ., 1957, Nr 1 (12), pp 85-98

ABSTRACT: This is a description of an experimental plant for cyclone smelting of comminuted ores and concentrates at the Power Institute, Academy of Sciences, Kazakh Soviet Socialist Republic. The major component of the installation is a cylindrical cyclone chamber (CC) 430 mm in diameter and 780 mm high, capable of handling up to 10 t charge per day, lined with chemically-bonded magnesite chrome to a thickness equal to one-half the length of a brick and cooled by an external water jacket. Under the CC and separated therefrom by a partition (of closely fitted 25-mm diameter tubes smeared with magnesite chrome) with a hole 170 mm in diameter, there is a settling chamber (SC) 1830 mm long and 1130 wide, lined with magnesite chrome. Air from a heater is delivered tangentially into the upper portion of the CC. An aperture for charging by

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Experimental Installation for Cyclone Smelting

a worm feed is provided in the cover of the CC, along with a tangential jet for the burning of pulverized coal and another for liquid fuel used to heat the CC (to a wall temperature of 600-800°C in 45-60 min). A heavy-oil jet is used to preheat the SC to 1300-1350° for 8-10 hours. In smelting Cu concentrates, the temperature of the walls of the CC rises to 1000-1200°, and that of its interior to 1600° and more. The temperature of the SC is held at 1250-1350°. Charging is continuous, except for the slag-tapping period. Gases from the SC pass through an air heater and proceed to the smokestack via a fan. A portion of the hot air is directed to the pulverized-coal nozzle. When used to smelt Cu concentrates, this equipment functioned steadily at a rate of 350-450 kg charge per hour, but when Cu-Zn and polymetallic concentrates were smelted, the air heater became clogged with dust (chiefly ZnO and PbO).

Ye.Z.

1. Ores--Processing 2. Industrial plants--Design 3. Industrial plants--Equipment
4. Industrial plants--Performance

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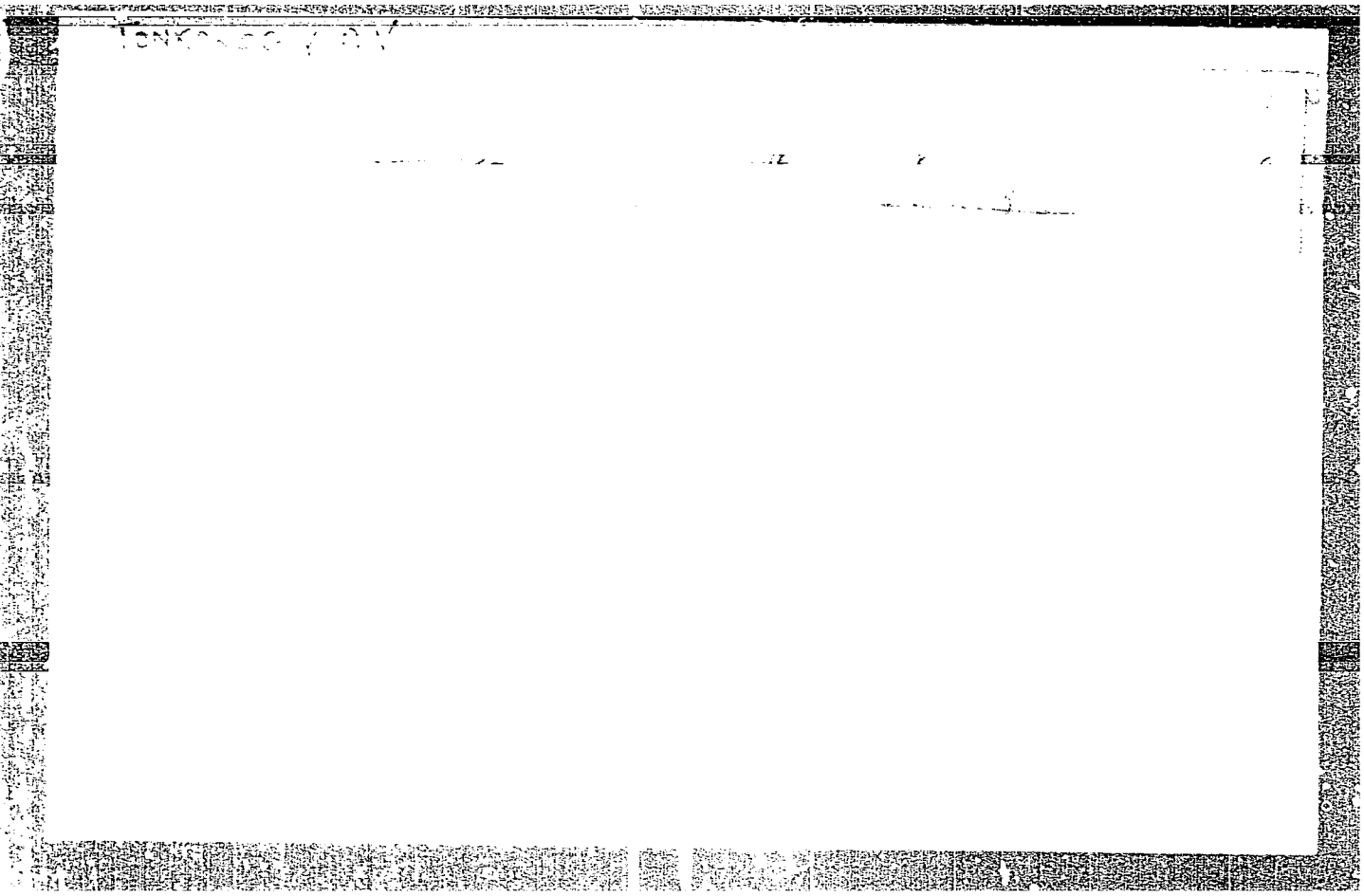

BASINA, I.P.; BUDON, V.D.; VDOVENKO, M.I.; ONAYEV, I.A.; TONKONOGIY, A.V.; SERGIYENKO, V.Ya.

Cyclone smelting of polymetallic concentrates. Vest. AN Kazakh. SSR 13 no.8:76-82 Ag '57. (MLRA 10:9)

1. Akademiya nauk Kazakhskoy SSR (for Basina, Budon, Vdovenko, Onayev, Tonkonogiy). 2. Chimkentskiy svintsovyy zavod (for Sergiyenko).

(Smelting)

TONKONOGIY, A.V., kandidat tekhnicheskikh nauk; BASINA, I.P.; VDOVENKO, M.I.

The cyclone process used in pyrometallurgy. TSvet.met. 30 no.1:30-42 Ja '57. (MLRA 10:3)

1.Akademiya nauk Kazakhskoy SSR.
(Smelting) (Turboblowers)
(Nonferrous metals--Metallurgy)

TONKONOGIY, A. V., BASINA, I. P.,

"On the Combustion and Separation of Fuel Particles in a Cyclonic Furnace," Aerodynamic and Heat Transfer Problems in Boiler and Furnace Processes; A Collection of Articles; Moscow, Gosenergoizdat, Moscow, 1958. 329 p.

Purpose: The book is intended for engineers and combustion specialists concerned with the design and operation of heating equipment and it is also for scientific workers and students of vtuzes.

Ion Konaeff, A.G.

• 10(2)

Sovershchaniye po prikladnoy gazovoy dinamike. Alma-Ata, 1956

Trudy (Transactions of the Conference on Applied Gas Dynamics) Alma-Ata, Izdatel'stvo AN Kazakhskoy SSR, 1958. 239 p. Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova.

Ed.: V.V. Aleksandriyskiy, Tech. Ed.: Z.P. Perokina; Editorial Board: L.A. Vulis (Resp. Ed.), V.P. Lashkarov, G.P. Leont'yeva, and B.F. Ustimenko.

PURPOSE: This book should be of interest to scientists and engineers working on problems of applied gas dynamics and may be of use to students.

COVERAGE: This book presents reports and brief summaries of the discussions which took place at the Conference on Applied Gas Dynamics in Alma-Ata in October 1956. The conference was subdivided into three areas of applied gas dynamics: jet flows of fluids and gases, the aerodynamics of heating processes, and the discharge of a fluid. The practical value of the Transactions of the Conference consists in the development of theory, methods of technical calculation and methods for systematic measurement applied to heating furnace, and other industrial processes for which, in most cases, aerodynamic phenomena are decisive factors.

AVAILABLE: Library of Congress

TONKONOGIY, A.V.; BASINA, I.P.; VDOVENKO, M.I.; KURMANGALIYEV, M.R.

New method of metal extraction from sublimates. Izv. AN Kazakh. SSR. Ser.energ. no.1:110-114 '59. (MIRA 12:11)
(Nonferrous metals--Metallurgy)

BASINA, I.P.; VDOVENKO, M.I.; KURMANGALIYEV, M.R.; REZNYAKOV, A.B.; TONKONOGIY, A.V.

Iron ore treatment flow sheet with the use of the cyclone method. Izv. AN Kazakh. SSR. Ser.energ. no.2:97-101 '59. (MIRA 12:7)

(Iron ores) (Separators (Machines))

TONKONOGIY, A.V., kand.tekhn.nauk; BASINA, I.P., kand.tekhn.nauk

Cyclone metallurgical process. Izv.vys.ucheb.zav.; energ.
3 no.3:101-109 Mr '60. (MIRA 13:3)

1. Institut energetiki AN KazSSR.
(Metallurgical furnaces)

S/030/60/000/012/017/018
B004/B056

AUTHORS: Reznyakov, A. B., Doctor of Technical Sciences,
Tonkonogiy, A. V., Candidate of Technical Sciences

TITLE: The Cyclone Melting of Metals

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, No. 12, pp. 119-120

TEXT: From September 21 to September 23, 1960 the vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po tsiklonnym protsessam (All-Union Scientific Technical Conference on Cyclone Processes) took place at Alma-Ata. It was organized by the Akademiya nauk Kazakhskoy SSR (Academy of Sciences Kazakhskaya SSR) and the Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov (State Scientific Technical Committee of the Council of Ministers) of this republic. It was further attended by delegates of academic and scientific institutes, as well as by specialists of the large metallurgical plants of the Kazakhstan and Ural. G.F. Knorre and A. V. Tonkonogiy as well as collaborators of the Institut energetiki (Institute of Power Engineering) of the Academy of Sciences Kazakhskaya SSR reported on research work carried out of the cyclone melting process.

The Cyclone Melting of Metals

S/030/60/000/012/017/018
B004/B056

A. B. Reznyakov and A. L. Tseft described its applicability in metallurgy and in the chemical industry. Together with the Institutes of the Academy of Sciences, experiments were carried out on a large pilot plant of the Balkhashskiy gornometallurgicheskiy kombinat (Balkhash Mining and Metallurgy Combine), and, according to a report made by V. V. Meyerovich, good results were obtained. The building of an industrial test plant has been completed. The experiments at the opytnyy zavod Vsesoyuznogo nauchno-issledovatel'skogo instituta tsvetnoy metallurgii (Experimental Plant of the All-Union Scientific Research Institute of Nonferrous Metallurgy) with waste-products of the hydrometallurgical working up of zinc concentrates from Ust'-Kamenogorsk were also successful (I.M. Tsygoda). The same was confirmed by A. I. Okunev for copper-zinc concentrates of the Ural, and by N. D. Taskayev for antimony ores from Kirgiziya. V.V.Tsyganov spoke about the reconstruction and building of new plants of the nonferrous metallurgy and gave the following data: If one puts capital investment costs and prime costs in the case of the Irtyshskiy medeplavil'nyy zavod (Irtysch Copper Melting Plant) for cyclone melting equal to unity, they amount to 1.25 and 1.30 for levitation melting, and to 1.36 and 1.55 for electric melting respectively. A. A. Ionass and V. V. Tikhonov spoke about

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cyclone melting of phosphorites and apatites and mentioned an hourly output of more than 1.5 t/m^3. It was decided to accelerate the industrial experiments in the Balkhash Combine and to erect test plants in the Ural and Eastern Kazakhstan. The building of a laboratory for large cyclone plants at the Academy of Sciences Kazakhskaya SSR is due to be completed this year. The coordination of scientific and technical research work with respect to technological cyclone plants was left to the Academy of Sciences Kazakhskaya SSR, and for cyclone power plants to the Moskovskoye vysshaye tekhnicheskoye uchilishche im. Baumana (Moscow Higher Technical School imeni Bauman).

TONKONOGIY, A.V.; VYSHENSKIY, V.V.

Study of convective heat transfer using models of cyclone chambers. Protsl. teploenerg. i prikl. teplofiz. no.1:183-205 '57.

Study of mass transfer using models of cyclone chambers. Ibid.:206-222 (MIRA 18:8)

TCHERCHOGIY, A.V.; KURMANGALIYEV, M.R.; MINTSAYEV, A.A.

Structure of combustion in a cyclone chamber with a plane diaphragm. Probl. teploenerg. i prikl. teplofiz. no.1:286-295 '61. (MIRA 18:8)

ONAYEV, I.A.; KUROCHKIN, A.F.; TONKONOGIY, A.V.; SALOMATOV, N.K.

Overall processing of Balkhash copper concentrates by the cyclone method. Vest. AN Kazakh. SSR 20 no.2:42-49 F '64.

(MIRA 18:1)

PIVNITSKIY, A.S.; TONKONOGIY, A.V.

Calculation of slag film in cyclone furnaces. Izv.AN Kazakh. SSR. Ser. tekh.i khim.nauk no.1:107-115 '63. (MIRA 17:3)

TONKONOGIY, A.V.

Pattern of the operating process in the cyclone combustion chamber. Izv. AN Kazakh.SSR. Ser.energ. no.1:23-29 '60. (MIRA 15:5)

(Furnaces—Combustion)

TONKONOGIY, A.V.

Cyclone burning of pulverized fuels and smelting of small ore particles and concentrates. Trudy Inst. energ. AN Kazakh. SSR 2:64-70 '60. (MIRA 15:1)

(Furnaces) (Ores)

REZNYAKOV, A.B., doktor tekhn.nauk; TONKONOGIY, A.V., kand.tekhn.nauk

Smelting in cyclone furnaces in nonferrous metallurgy. Vest. AN SSSR 31 no.10:102-105 O '61. (MIRA 14:9)
(Nonferrous metals) (Smelting)

S/137/61/000/012/046/149
A006/A101

AUTHORS: Reznyakov, A. B., Tonkonogiy, A. V.

TITLE: A cyclonic power-metallurgical process

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 26 - 27, abstract 120187 (V sb. "Nauka Sov. Kazakhstana", Alma-Ata, AN KazSSR, 1960, 301 - 324)

TEXT: The intensifying of basic pyrometallurgical processes requires new types of furnace, operating on crushed material. Such a furnace is, in particular, that operating on a cyclonic process. The authors analyze the theoretical principles of the process in the cyclonic apparatus. Equations are given for the movement of the gaseous medium and solid particles; carbon particle combustion in the chamber and on the walls, and heat-exchange equation for an individual particle. The expediency is demonstrated of using a cyclonic apparatus for pyroprocesses which take place in the diffusion range, as e.g. for oxidizing-melting of sulfide concentrates. Experimental results are presented, obtained on an enlarged cyclonic unit at the Institute of Power Engineering, AS KazSSR, from melting Cu sulfide concentrates, polymetallic concentrates, cakes of the Ust'-Kameno-

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A cyclonic power-metallurgical process

S/137/61/000/012/046/149
A006/A101

gorsk Combine, and slags of the Leninogorsk Plant. Information is presented on the operation of a semi-industrial unit for the reprocessing of Cu-concentrates at the Balkhash Combine of Mining and Metallurgy, confirming the possibility of using the cyclonic principle in melting Cu sulfide concentrates. Outlooks of applying the cyclonic process to metallurgy are discussed.

L. Povedskaya

[Abstracter's note: Complete translation]

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18 3100

27889
S/030/61/000/010/006/011
B102/B104

AUTHORS: Reznyakov, A. B., Doctor of Technical Sciences, and Tonkonogiy, A. V., Candidate of Technical Sciences

TITLE: Cyclone melting in non-ferrous metallurgy

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 10, 1961, 102 - 105

TEXT: The cyclone process described was developed by the Akademiya nauk Kazakhskoy SSR (Academy of Sciences Kazakhskaya SSR). Its principle consists in a mixture of finely pulverized ore and fuel being blown tangentially into the cylindrical cyclone chamber (150 m/sec); this mixture is deposited on the chamber wall, and melts or burns in an eddy current of glowing gas. The melting products reach a collecting chamber where they are separated into slag and matte. Laboratory and pilot plant tests were conducted at the Institut energetiki Akademii nauk Kazakhskoy SSR (Institute of Power Engineering of the Academy of Sciences Kazakhskaya SSR), tests on an industrial scale at the Balkhashskiy gornometallurgicheskiy kombinat (Balkhash Mining Metallurgical Combine). The pilot plant chamber had a capacity of 10 tons charge per day, the industrial one a

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Cyclone melting in...

capacity of 100 tons per day (1 m diameter, 1.7 m height). The latter was used for the melting of copper sulfide with mazout and coal dust as fuels, and operated continuously for 45 days. It also proved useful for the melting of other nonferrous ores, and permitted a fuel saving of 10 - 12%. Further two cyclone chambers were built by the Balkhash Combine and the first of them was put into operation in November 1960 (1.5 m diameter, 2.3 m height). A comparison with data of reverberatory furnaces showed that cyclone chambers have a number of advantages. Experiments on the dressing of materials containing different metals (Pb, Zn, C, S) were successful. Cyclone melting installations proved specially suited for extracting metallic residues from old slags. These residues amount to about 9% for Zn and 2.5% for Pb and can be molten out to 85 and 89%, respectively. New experiments concluded in 1960 permitted an increase of these figures to 90 and 95%, respectively. The Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov (All-Union Scientific Research Institute of Nonferrous Metals) conducted pilot plant tests of cyclone melting of Ust-Kamenogorsk zinc, the Kazakhskiy gosudarstvennyy institut po proyektirovaniy u predprinyatiy tsvetnoy metallurgii (Kazgiprotsvetmet) (Kazakh State Institute for the

27889
S/030/61/000/010/006/011
B102/B104

Cyclone melting in...

Planning of Establishments of Nonferrous Metallurgy) participating among others. Besides financial savings, the cyclone melting process also permits a total automation of the process. There are 3 tables and 1 Soviet reference.

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S/031/60/000/011/006/008
A161/A133

AUTHORS: Reznyakov, A. B., Tonkonogiy, A. V.

TITLE: Conference on cyclone processes

PERIODICAL: Akademiya nauk Kazakhskoy SSR, Vestnik, no. 11, 1960, 101 - 102

TEXT: An all-Union conference on cyclone processes was convened from 21 through 23 September 1960 in Alma-Ata. The Academy of Sciences and the GNTK of the Kazakhskaya SSR were the initiators. All leading research and design institutes of the nonferrous and ferrous metallurgy of the USSR participated: Institut metallurgii Akademii nauk SSSR (The Institute of Metallurgy of the Academy ofSciences of the USSR), Gintsvetmet, Giprotsvetmet, Giredmet, Giprostal', Tsnichermet, Unipromed', Vniimt, Vniitsvetmet, Kazgiprotsvetmet, and others. Chemistry and power engineering research institutes took part as well. The author of the cyclone principle (i.e. of the first cyclone stoker) and co-author of the cyclone melting process Professor G. F. Knorre (of MVTU im. Bauman), was present. The 150 participants included technicians from the Balkhash and Dzhezkazgan metallurgical combines, the Ust'-kamenogorsk lead-and-zinc combine; the Chimkent lead plant, the Kazakhstan "magnitka", the Sredneural'skiy medeplavil'nyy zavod

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(Mid-Ural copper plant), the Magnitogorsk metallurgical combine. Nine of the 25 reports were on the theory of the process. Professor G. F. Knorre and A. V. Tonkonogiy reported on the present state of the cyclone process. Reports of the Institut energetiki AN KazSSR (Power Engineering Institute of the Academy of Sciences of the KazSSR) concerned the motion of air and gas, of fuel particles and materials, combustion, oxidation, heat exchange. Professor A. B. Reznyakov and Professor A. L. Tseft outlined the theoretical application aspects of the process in metallurgy and in chemical industry. [Abstracter's note: No details are included]. Eleven reports presented investigation results and information on cyclone heat projects for the nonferrous metallurgy. V. B. Meyerovich of Balkhashskiy gornometallurgicheskiy kombinat (BGMK) (Balkhash Mining-and-Metallurgical Combine) reported on behalf of the Academy of Sciences of the KazSSR and the BGMK on the results of investigations of cyclone heat in a 100-ton furnace at the BGMK. The furnace reached the rated productivity. Its output per floor space unit is twice the output of reverberatory furnaces; the fuel consumption is by one half less; the copper content in matte can be much higher (which facilitates further processing in converters); the losses with dust are lower; the content of sulfuric anhydride in the gas from the furnace meets the standard of sulfuric acid production. The first full-scale two cyclone chambers have been installed in one

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reverberatory furnace at the BGMK after the experiments. I. M. Tsygoda (of Vniitsvetmet) reported on the behalf of the Academy of Sciences of the KazSSR and Vniitsvetmet on experiments with zinc cakes (wastes of hydrometallurgical process). The experiments have not yet been finished, but the advantages of the cyclone process are evident. It follows from the reports of A. I. Okunev (of Unipromed') and others that the high efficiency of the cyclone process has been confirmed in melting roasted copper-zinc concentrates and other materials. N. D. Taskayev (of AS of the Kirgizskaya SSR) said that the cyclone process proved to be the most effective method in processing antimony ores in Kirgiziya. V. V. Tsyganov (ofKazgiprotsvetmet) reported on some results of design work for the reconstruction of the existing and the construction of new ferrous industry plants, mentioning that in the case of reconstruction and expansion of the Irtyshskiy copper plant the cyclone process will require lower investment costs, and the production costs will be lower than for electric melting. The reports of A. A. Ionass (of NIUIF) and V. V. Tikhonov of the Institut khimicheskikh nauk AN KazSSR (Institute of Chemical Sciences of AS KazSSR) concerned cyclone melting of apatites and phosphorites for fertilizers and fodders. The high efficiency of the cyclone processes in various applications was emphasized in the conference decisions, as well as too long preparations for practical use. Construction of

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pilot full-scale cyclone furnaces was recommended in the Ural (for copper-zinc concentrates) and in East Kazakhstan (for polymetallic ores), and faster completion of semi- industrial and larger-scale experiments delaying the completion of projects (at the Dzhezkazgan, Irtyshskiy, Tekeliyskiy, Achisayskiy combines and other places). The completion of the big special large-scale cyclone process laboratory at the Academy of Sciences of the KazSSR was mentioned as particularly important. The Academy of Sciences of the KazSSR has been commissioned with the coordination of work with technological cyclone installations, and the MVTU im. Baumana (MVTU imeni Baumana) of work with cyclone power installations. The further research work planned includes cyclone melting of iron ores.

LENKOVSKIY, A. V.

PHASE I BOOK EXPLOITATION SOV/5690

Soveshchaniye po prikladnoy gazovoy dinamike. Alma-Ata, 1956

Trudy Soveshchaniya po prikladnoy gazovoy dinamike, g. Alma-Ata, 23-26 oktyabrya 1956 g. (Transactions of the Conference on Applied Gas Dynamics, Held in Alma-Ata, 23-26 October 1956) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 293 p. Errata slip inserted. 900 copies printed.

Sponsoring Agency: Akademiya nauk Kazakhskoy SSR. Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova.

Editorial Board: Resp. Ed.: L.A. Vulis; V.P. Kashkarov; T.P. Leont'yeva and B.P. Ustimenko. Ed.: V.V. Aleksandriyskiy. Tech. Ed.: Z.P. Korokina.

PURPOSE: This book is intended for personnel of scientific research institutes and industrial engineers in the field of applied fluid mechanics, and may be of interest to students of advanced courses in the field.

Transactions of the Conference (Cont.) SOV/5690

COVERAGE: The book consists of the transcriptions of 31 papers read at the conference on gas dynamics which was convened under the initiative of the Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova (Kazakh State University imeni S.M. Kirov) and the Institut energetiki Akademii nauk Kazakhskoy SSR (Institute of Power Engineering of the Academy of Sciences Kazakhskaya SSR) and held October 23-26, 1956. Three branches of applied gas dynamics were discussed, namely: jet flow of liquids and gases, aerodynamics of furnace processes, and the outflow of liquids. The practical significance of the Transactions of the conference consists in the adaptation of theory to methods of technical computation and measuring methods related to industrial furnaces and other industrial processes in which aerodynamic phenomena play a predominant role. Eight papers read at the Conference are not included in this collection for various reasons. The authors of the missing papers are: L.D. L'vov (Thermal and Aerodynamic Characteristics of Pulverized Coal Flare Burners) and A.A. Goleyevskiy (Outlines and Physical Models of the Jet Motion Mechanics of Fluids), M.I. Akatov, Ye. P. Bogdanov, S.V. Bukman, T.K. Mirzenko, A.B. Reznyakov, and G.V. Yakubov. L.G. Loytsyanskiy is mentioned as being in charge of a department of the Kazakh State University, and I.D. Kalyubov, Candidate of Physical and Mathematical Sciences, Docent, as a member of the same university. References are found at the end of

Session of October 24, 1956 (Morning)

Transactions of the Conference (Cont.) SOV/5690

Session of October 24, 1956 (Evening)

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REZNYAKOV, A.B.; TONKONOGIY, A.V.

Conference on cyclone processes. Vest.AN Kazakh.SSR 16 no.11:101-102 N '60. (MIRA 13:12)

(Metallurgy)

ASHAYEV, M.M.; TONKONOGIY, A.Ya.

Operating hydraulic systems of Dt-54A tractor combined with PN-4-35 plows. Mekh.sil'.hosp. 8 no.9:12-14 S '59.
(MIRA 13:1)

1. Rabotniki spetsial'nogo konstruktorskogo byuro zavoda im. Oktyabri'skoy revolyutsii.
(Tractors--Hydraulic equipment)

MIKHNEV, A.L., professor; TONKONOGIY, I.G., kandidat meditsinskikh nauk; KRYLOVA, N.M.; KOSTYUK, V.D.

Therapeutic effectiveness of plasmol in gastric and duodenal ulcers, in nonspecific infectious polyarthritis, bronchial asthma, and radiculitis. Sov.med.20 no.10:74-78 O '56. (MLRA 10:1)

1. Iz Otdela klinicheskoy farmakologii (zav. - prof. A.L.Mikhnev) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsinskoy imeni akad. N.D.Strazhesko.

(PLASMA, ther. use
deproteinized plasma)

TONKONOGIY, I.G.

TONKONOGIY, I.G.

Cholesterin fractions of the blood in wound sepsis. Medych.zhur. 17:323-331 '47. (MIRA 11:1)

1. Z Ukrains'kogo institutu klinichnoi meditsini (direktor - akad. M.D.Strazhesko)
(CHOLESTEROL) (BLOOD--EXAMINATION) (WOUNDS)

TONKONOGIY, I.G.

TONKONOGIY, I.G.

Effect of circulatory decompensation on lipoid exchange in hypertension. Medych.zhur. 18 no.1:116-125 '48. (MIRA 10:12)

1. Z Ukrains'kogo institutu klinichnoi meditsini Ministerstva okhoroni zdorov'ya URSR(direktor - akad. M.D.Strazhesko)
(HYPERTENSION) (LIPOIDS)
(BLOOD--CIRCULATION, DISORDERS OF)

TONKONOGIY, I.G., starshiy nauchnyy sotrudnik; MOREYNIS, B.I.

Cholinesterase activity of blood serum in nonspecific infectious and acute rheumatic polyarthritis during treatment with cortisone and adrenocorticotropic hormone. Mat.po obm.nauch.inform. no.2: 147-154 '58. (MIRA 13:6)

1. Iz otdela klinicheskoy farmakologii (zav. - prof. A.L. Mikhnev) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny.
(CHOLINESTERASE) (ARTHRITIS) (ACTH)

MYASISHCHEV, V.N.; TONKONOGIY, I.M.

Conference on methods of the research on pathophysiology of higher nervous activity in humans and medical psychology. Vop. psikhol no.3:176-180 My-Je '63. (MIRA 17:2)

BEYN, Esfir' Solomonovna; TONKONOGIY, I.M., red.

[Aphasia and ways of overcoming it] Afaziia i puti ee preodoleniia. Leningrad, Meditsina, 1964. 233 p.
(MIRA 17:11)

FRANTSUZ, A.G.; TONKONOGIY, I.M.; LEVIN, I.Ya.

Use of electronic computers for solving problems of differential diagnosis in aphasia. Zhur. nevr. i psikh. 64 no. 12:1759-1765 '64. (MIRA 18:1)

1. Laboratoriya meditsinskoy psikhologii (nauchnyy rukovoditel'- prof. V.N.Myasishchev) i nefrologicheskoye otdeleniye (nauchnyy rukovoditel' - prof. G.Z.Levin) Nauchno-issledovatel'skogo psikhonevrologicheskogo instituta im. Bekhtereva, Leningrad.

TONKONOGIY, I.M.; TSUKERMAN, I.I.; SHKLOVSKIY, V.M. (Leningrad)

Conduction aphasia and disorders of operative memory. Zhur. nevr. i psikh. 65 no.12:1773-1776 '65. (MIRA 19:1)

1. Submitted April 1, 1963.

TONKONOGIY, I.M.; TSUKKERMAN, I.I.

Use of images distorted by fluctuations in the study of disorders of visual gnosia. Zhur. nevr. i psikh. 63 no.2:236-239 '63. (MIRA 16:11)

1. Laboratoriya meditsinskoy psikhologii (zav. - prof. V.N. Myasishchev) i 6-ye nevrologicheskoye otdeleniye (zav. - doktor med. nauk G.Z.Levin) Leningradskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni V.M.Bekhtereva.

*

TONKONOGIY, I.M.

New data on the topical diagnostic importance of clinical psychological examinations in kinetic disorders of speech. Trudy Gos. nauch.-issl. psikhonevr. inst. no.24:189-207 '61. (MIRA 15:5)

1. Psikhonevrologicheskaya laboratoriya i nevrologicheskoye sosudistoye otdeleniye Gosudarstvennogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni Bekhtereva.
(SPEECH, DISORDERS OF—DIAGNOSIS)

TONKONOGIY, Iosif Moiseyevich; ZYATYUSHKOV, A.I., red.; BUGROVA, T.I., tekhn. red.

[Speech disorders, their prevention and treatment] Rechevye rasstroistva, ikh preduprezhdenie i lechenie. Leningrad, Medgiz, 1963. 34 p. (MIRA 17:3)

ABRAMOVICH, G.B.; BOKIY, I.V.; ZAKHAROVA, V.V.; MIRSKAYA, M.M.; TONKONOGIY, I.M.

Investigations of some psychopathological conditions in organic brain diseases and their significance for problems in localization. Trudy Gos. nauch.-issl. psikhonevr. inst. no.20:63-74 '59. (MIRA 14:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy psikhonevrologicheskiy institut imeni V.M. Bekhtereva, Leningrad.
(BRAIN--DISEASES) (MENTAL ILLNESS)

TONKONOGIY, I.M.

History of investigation of aphasia by Russian researchers. Zhur. nevr. i psikh. 54. no.12:1029-1034 D '54. (MLRA 8:2)

1. Leningradskiy nauchno-issledovatel'skiy psikhonevrologicheskiy institut imeni V.M.Bekhtereva.
(APHASIA,
hist. of research in Russia)

TONKONOGIY, I. M.

"The Disruption of the General Activity of the Signal Systems During Motor Aphasia(Clinical-Experimental Investigation)." Cand Med Sci, Joint Sci Council of a Group of Leningrad Insts, Acad Med Sci USSR, Leningrad, 1955. (KL, No 13, Mar 55)

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TONKONOGIY, I.M.

Disorders of higher nervous function in motor aphasia. Zh. vys. nerv. deiat. 5 no.6:783-792 N-D '55. (MLRA 9:3)

1. Gosudarstvennyi psikhonevrologicheskii nauchno-issledovatel'skiy institut imeni V.M. Bekhtereva, Leningrad.
(APHASIA,
ataxic, higher nervous funct. disord. in)
(CENTRAL NERVOUS SYSTEM, in various diseases,
aphasia, ataxic, higher nervous funct. disord)

TONKONOGIY, I.M.

Conference on the methods of studying the pathophysiology of the higher nervous activity in man and on medical psychology (October 29-31, 1962, Leningrad). Zhur.nevr. i psikh. 63 no.12:1891-1895 '63. (MIRA 18:1)

TONKONOGIY, I.M.; TSUKKERMAN, I.I.

Information theory approach to the study of perception disturbances. Vop. psikhol. 11 no.1:83-92 Ja-F '65. (MIRA 18:4)

1. Laboratoriya meditsinskoy psikhologii, nevrologicheskoye otdeleniye Psikhonevrologicheskogo instituta imeni Bekhtereva, Leningrad.

L 9860-66 EWT(1)/EEC(k)-2/EWA(h)/ETC(m) WH

ACC NR: AP6001003 SOURCE CODE: UR/0286/65/000/022/0071/0071

44,55 44,55 44,55

INVENTOR: Varlamov, M. L.; Manakin, G. A.; Tonkonogiy, Sh. B.

ORG: none

TITLE: Acoustic wattmeter. Class 42, No. 176451.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 71

21,44,55

TOPIC TAGS: wattmeter, acoustic wattmeter

ABSTRACT: This Author Certificate proposes an acoustic wattmeter containing an acoustic pickup and a millivoltmeter for measuring the power of acoustic generators. To increase both the measurement accuracy and speed, the pickup is mounted on a mobile base which can be shifted by two drives at a constant linear velocity in a plane perpendicular to the sound propagation. An amplifier, a functional transducer, an integrator, and relay block contacts are connected in series to the output of the millivoltmeter. The relay block contacts assure simultaneous coupling of the acoustic pickup drives, the electric timer, the integrator, and the recording instruments. [JR]

Orig. art. has: 1 figure.

SUB CODE: 09, 14/ SUBM DATE: 23Sep63/ ATD PRESS: 4165

Card 1/1 UDC: 534.613:621.317.784

TONKONOGIY, V.V.

REZNYAKOV, A.B., doktor tekhnicheskikh nauk; TONKONOGIY, V.V., kandidat tekhnicheskikh nauk.

Inventors are expecting Committee's assistance in introducing inventions. Izobr.v SSSR 2 no.5:39-40 My '57. (MLRA 10:7)
(inventions)

TONKONOGIY, I.G.

MIKHNEV, A.L., professor; TONKONOGIY, I.G., kandidat meditsinskikh nauk

Results of treating nonspecific infectious arthritis and acute rheumatism with cortisone and adrenocorticotrophic hormone. Vrach. delo no.4:355-360 Ap '57. (MLRA 10:7)

1. Otdel klinicheskoy farmakologii Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny im. akad. N.D.Strazhesko i vtoraya kafedra terapii Kiyevskogo instituta usovershenstvovaniya vrachey (zav. otdelom i zav. kafedroy - prof. A.L.Mikhnev)
(ARTHRITIS) (RHEUMATIC FEVER) (CORTISONE) (ACTH)